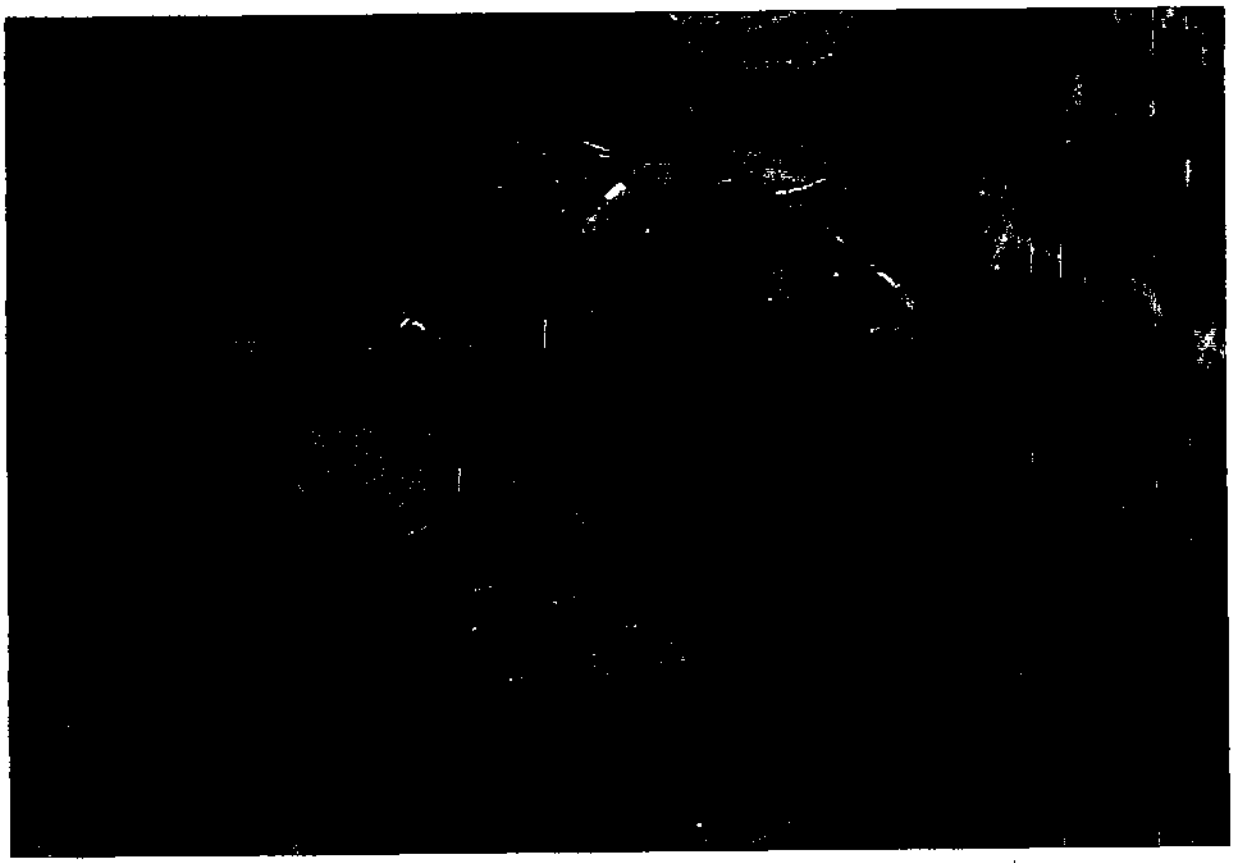
Contaminant Screening Study
Libby Asbestos Site, Operable Unit 4
Libby, Montana

Draft Summary Report for the Cemetery Park Ball Fields

August 2005



Summary Report

Response Action Contract
for Remedial, Enforcement Oversight, and Non-Time
Critical Removal Activities at Sites of Release or
Threatened Release of Hazardous Substances
in EPA Region 8

U.S. EPA Contract No. 68-W5-0022

Draft Summary Report
For the Cemetery Park Ball Fields
Contaminant Screening Study,
Libby Asbestos Site, Operable Unit 4

August 2005

Work Assignment No.: 137-RIRI-08BC
Document Control No.: 3282-137-RT-OTHR-22890

Prepared for:
U.S. Environmental Protection Agency
Region 8
999 18th Street, Suite 500
Denver, Colorado 80202

Prepared by:
CDM
1331 17th Street, Suite 1100
Denver, Colorado 80202

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Work Assignment No.: 137-RIRI-08BC

Prepared by: _____ Date: 8/4/05
Kristin Sloane
CDM Project Scientist

Reviewed by: _____ Date: 8/4/05
Geoff McKenzie
CDM Project Engineer

Reviewed by: _____ Date: 8/4/05
Kimberly Zills
CDM Quality Assurance Coordinator

Approved by: _____ Date: _____
Jim Christiansen
EPA Region 8 Remedial Project Manager

Contents

Figures

Acronyms

CDM	CDM Federal Programs Corporation
CSS	contaminant screening study
EPA	U. S. Environmental Protection Agency
LA	Libby amphibole
PLM	polarized light microscopy
QA/QC	quality assurance/quality control
RI	remedial investigation
SAP	sampling and analysis plan
Site	Cemetery Park Ball Fields
SRC	Syracuse Research Corporation
VE	visual area estimation

Section 1
Introduction

The purpose of this report is to summarize contaminant screening study (CSS)/ remedial investigation (RI) field activities conducted by CDM Federal Programs Corporation (CDM) at the Cemetery Park Ball Fields (Site) in Libby, Montana on August 17 and 19, 2002. Figure 1 presents the site location.

Consistent with other areas of Libby, Montana, vermiculite from Vermiculite Mountain may have been used as base and/or fill material throughout the Cemetery Park ball fields, parking areas, walkways and wooded areas. Visual inspections were performed and soil samples were collected, to determine if vermiculite and/or Libby amphibole (LA) asbestos were present in these areas of the park.

All investigation activities were conducted in accordance with the Final Sampling and Analysis Plan (SAP), Remedial Investigation (CDM 2002a), and Final Sampling and Analysis Plan Addendum for the Cemetery Park Ball Fields (SAP Addendum) (CDM 2002b).

Section 2
Field Activities

The Site investigation consisted of a verbal interview, visual inspection for vermiculite, and soil sampling. Unless noted in Section 3.1, all field documentation and sample collection procedures provided or referenced in the SAP Addendum were followed. The following sections summarize investigation field activities.

2.1 Verbal Interview

An interview was conducted on January 14, 2002 with Mr. Cameron Foote who, at the time of the interview, leased the property. According to Mr. Foote, prior to the construction of the baseball fields, the area was undeveloped and mostly underwater (i.e., swamp). The area was backfilled in 1995 by the city of Libby. Mr. Foote suspects that fill material from the mine may have been used. It is estimated that approximately two to three feet of riprap and three to five feet of common fill were used as backfill throughout the area. Overlying this area is approximately 6 to 8 inches of topsoil that originated from the Libby Baptist Church yard. Gravel was used to finish the parking lots, but Mr. Foote did not know where this gravel came from.

Following the interview, the U.S. Environmental Protection Agency (EPA) requested that surface soil samples be collected at the ball fields in May 2002 based on the concerns of children being potentially exposed to asbestos during the upcoming baseball season. On May 6, 2002 during the Phase I investigation, soil samples were collected from the four ball fields. More information on this sampling event can be found in the SAP Addendum (CDM 2002b). The sampling team collected additional samples during the August 2002 event, to further characterize the contents of the ball fields under the CSS investigation.

2.2 Visual Inspection

As part of the August 2002 Site investigation, a visual inspection was performed during the soil sampling efforts to determine if any vermiculite was present on the site. No vermiculite was observed during the soil sampling events. Field observations are noted in the logbook pages included in Appendix A.

2.3 Soil Sampling

Soil sampling at the Site was conducted on August 17th and 19th, 2002. A sketch of the site layout prior to sample collection was drawn on the logbook pages included in Appendix A. Each sample was a five point composite consisting of a center subsample and four additional subsamples within the designated area. Sample locations were selected from the walkway, parking lots, ball field and wooded areas. Locations of samples collected are shown on Figure 2.

A total of 20 samples were collected at the Site along with two duplicates. Surface soil samples were collected from 0-4 inches and subsurface samples were collected from approximately 4-18 inches. Surface and subsurface samples were co-located but individually collected. Four surface and four subsurface samples were collected from the parking lots, two surface samples were collected from the walkways, two subsurface samples were collected from the ball fields and two surface and two subsurface samples were collected from the wooded areas. Test results for the 20 samples collected were all non-detect for LA and did not contain any visible vermiculite. Sample locations and results are presented in Figure 2.

Soil samples were collected, prepared, and analyzed in accordance with procedures presented or referenced in the SAP Addendum.

All logbook pages and field sample data sheets for this event are in Appendices A and B, respectively. Analytical results for the August 2002 Event are in Appendix C.

2.4 Soil Sample Processing and Analysis

As applicable to all soil samples collected under the Libby RI program, soil samples were processed at CDM's close-support facility in Denver in accordance with the soil preparation plan (CDM 2003). After processing, samples were sent to one of five analytical labs and analyzed for LA asbestos using two techniques: Polarized light microscopy (PLM) by visual area estimation (VE) and the PLM gravimetric method (Syracuse Research Corporation [SRC] 2003). EPA is in the process of evaluating the accuracy and reproducibility of each of these methods. However, based on EPA's performance evaluation study to date, PLM-VE results are currently being used to make project remediation decisions. For the purposes of this report, only PLM-VE results are presented.

Section 3
Quality Assurance/Quality Control

CDM has established a formal quality assurance program to ensure consistently high quality project deliverables under its Response Action Contract with EPA. For work conducted by CDM in Libby, quality assurance/quality control (QA/QC) measures include the collection of quality control samples (such as soil duplicate samples and equipment blanks), implementation of a laboratory quality assurance program, review of project reports by a CDM-approved quality assurance staff member, and an auditing component to assess the effectiveness of the quality assurance program. The following sections describe deviations from the SAP Addendum and the implications of those deviations on project or data quality objectives.

3.1 Deviations from the Sampling and Analysis Plan Addendum

All requirements in the SAP Addendum were met without exception.

3.2 Achievement of Data Quality Objectives

The data quality objectives of this investigation were met.

3.3 Data Validation and Reporting

None of the analytical data contained in this report was further validated beyond that performed by the laboratory as part of their QA/QC program. Therefore, it is assumed that the raw data are useable for their intended purpose, which is to determine the extent of LA asbestos contamination at the Site.

Section 4
References

CDM. 2002a. Final Sampling and Analysis Plan, Remedial Investigation, Contaminant Screening Study, Libby Asbestos Site, Operable Unit 4. April.

_____. 2002b. Final Sampling and Analysis Plan Addendum for the Cemetery Park Ball Fields. July.

_____. 2003. Close Support Facility, Soil Preparation Plan, Libby, Montana Asbestos Project, Sample Processing. April.

SRC. 2003. Analysis of Asbestos Fibers in Soil by Polarized Light Microscopy. SRC-LIBBY-03 (Rev. 0). March 3, 2003.

Figures

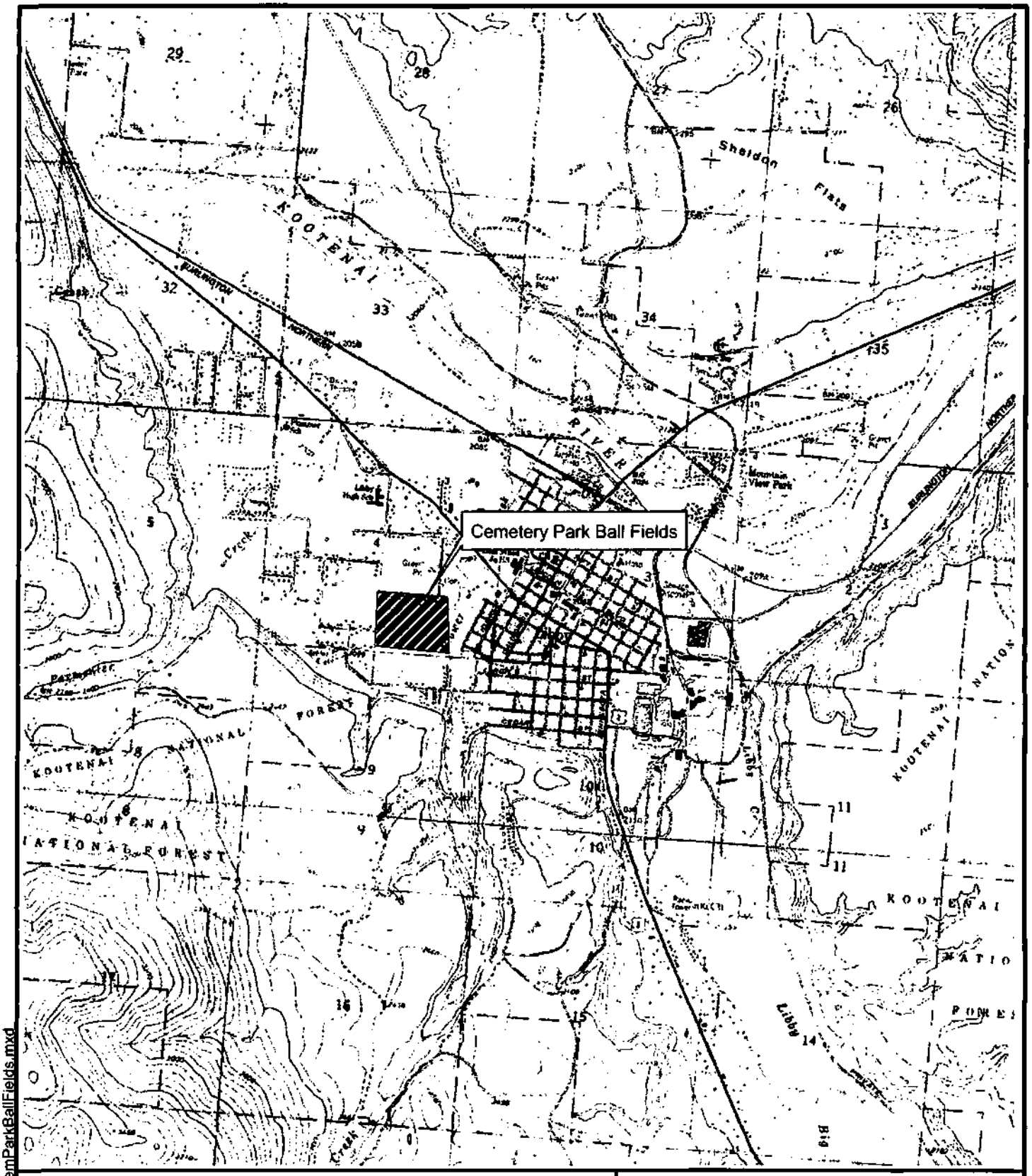


Figure 1

Site Location Map
Cemetery Park Ball Fields
Libby, Montana

CDM

Map Filename: figure1-1CemParkBallFields.mxd

Map File Name: Figure2_BallPark.mxd 04/20/05

Legend

- Sample Locations (All non-detect)

N
W E
S

Feet
0 50 100 200

1 inch equals 100 feet

Figure 2

Soil Boring Locations
Sampling Event
Cemetery Park Ball Fields
Libby, Montana

CDM

Appendix A
Logbook Pages

Location Cemetery Park BALL FIELDS Date 8/17/02

Project / Client LIBBY ASBESTOS VOLPE EPA Region 8

Notebook: Robert Hunt — Per Diem

Personnel: CDM: Robert Hunt, Mark Schlosser, Rodney Peterson, + Rob Sasseen. Per Diem 8/17/02

PPE: Level D modified — Per Diem

Weather: sunny - clear - high in the 80's

Instruments: TROUBLE UNIT PRO XRS

Calibration: NA

Activities: Surface + subsurface soil sampling @ the cemetery ball fields under document: CONTAMINANT SCREENING study LIBBY Asbestos Site, operable UNIT 4, LIBBY, MONTANA. - SAP - Addendum. — Per 8/17/02

1000 - Arrive @ Cemetery Ball Fields with Dee Curren and discuss sampling procedures + objectives. Samples will collected by 8/17/02

Ruth Hunt 8/17/02

Location Cemetery Park BALL FIELD Date 8/17/02

Project / Client LIBBY - ASBESTOS - VOLPE EPA Region 8

1006 - Begin soil sampling @ Cemetery Park the two parking lots will be sampled first (surface + subsurface samples). Sampler is prepared in modified level D. Sample areas are sprayed with water mister to suppress dust.

Parking Lot 1 (0-4") — 110 North — CS- 04692 — SP- 115078 per plan — Field Data Sheet 001996 + COC 003295

Parking Lot 1 (0-4") — 110 South — CS- 04693 — SP- 115223 per plan — Field Data Sheet 001994 + COC 003295

Parking Lot 2 (0-4") — 1115 East — CS- 04694 — SP- 115224 per plan — Field Data Sheet 001995 + COC 003295

Parking Lot 2 (0-4") — 1125 West — CS- 04695 — SP- 115225 per plan — Field Data Sheet 001997 + COC 003295

Parking Lot 1 (4-15") — 1200 South — CS- 04696 — SP- 115078 per plan — Field Data Sheet 001997 + COC 003295

Parking Lot 1 (4-16") — 1245 South — CS- 04697 — SP- 115223 per plan — Field Data Sheet 001997 + COC 003295

Ruth Hunt 8/17/02

Location Cemetery Park Ball Fields Date 8/17/02

Project / Client LIBBY ASBESTOS UCRE - EPA Region 8

Parking Lot 2 (1515 EAST) CS- 04698 SP- 115224

Field Data Sheet 001998 + COC 003295 (4-16")

Parking Lot 2 (1535 WEST) CS- 04699 SP- 115225

Field Data Sheet 001998 + COC 003295 (4-16")

Parking Lot 2 (Dup) (1535 WEST) CS- 04700 SP- 115225

Field Data Sheet 001998 + COC 003295 (4-16")

Walkway #1 (1610 0-4") CS- 04701 SP- 115226

Field Data Sheet 001999 + COC 003295

Walkway #2 (1620 0-4") CS- 04702 SP- 115227

Field Data Sheet 001999 + COC 003309

Yard (Ballfield #1) (1705 4-16") CS- 04703 SP- 115228

Field Data Sheet 001999 + COC 003309

Yard (Ballfield #2) (1750 4-16") CS- 04704 SP- 115229

Field Data Sheet 002000 + COC 003309

1810 - FINISHED SAMPLING FOR THE DAY - WILL CONTINUE MONDAY - HEAD BACK TO COM OFFICE FOR PAPERWORK ETC

- 8/17/02

PHOTO LOG

Location Cemetery Park Date 8/17/02

Project / Client LIBBY ASBESTOS - UCRE EPA Region 8

Photo	Description (Address)
(1)	PICTURE OF PARKING LOT SAMPLE LOCATION (0-16" XP. LOT #2
(2)	PICTURE OF PARKING LOT SAMPLE LOCATION (0-16" XP. LOT #1
(3)	BLACK PICTURE - DID NOT SAVE UP

- 8/17/02

136 Location ~~LIBBY~~ Cemetery Ball Fields Date 8/14/02

Project / Client LIBBY ASBESTOS - USEPA Region 8

0930 - Arrive @ Cemetery Ball Fields - Continue sampling (surface + subsurface) in Fields, parking lots, walkways and wooded areas. PPE for sampling - Level D modified. Sample areas are sprayed with water during sampling.

BALLFIELD #3
1000 **CS- 04705** SP- 115230
Field Data sheet 002001 - COC - 003317 (4-18")

BALLFIELD #4
1100 **CS- 04706** SP- 115231
Field Data sheet - 002001 - COC - 003317 (4-18")

BALLFIELD #4
100 DUPLICATE **CS- 04707** SP- 115231
Field Data sheet - 002001 - COC - 003317 (4-18")

WOODED AREA 1
1345 0-4" **CS- 04708** SP- 115232
Field Data sheet - 002002 - COC - 003317 (0-4")

WOODED AREA
1415 4-18" **CS- 04710** SP- 115232
Field Data sheet 002002 COC 003317

WOODED AREA 2
1500 0-4" **CS- 04709** SP- 115233
Field Data sheet 002002 COC - 003317

- 8/19/02

137 Location CEMETERY BALL FIELDS Date 8/19/02

Project / Client LIBBY ASBESTOS - USEPA Region 8

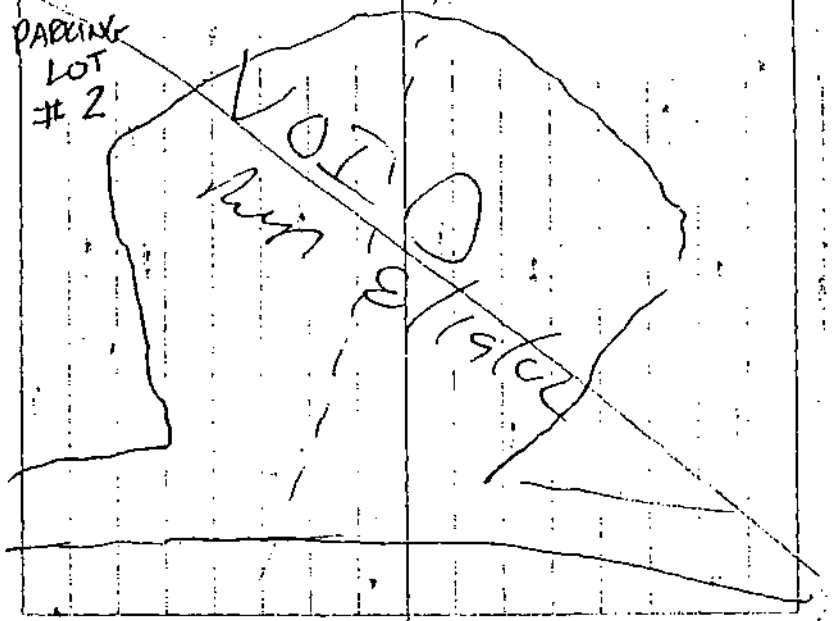
Wooded Area 2
1545 0-18" **CS- 04711** SP- 115233
Field Data sheet 002003 COC 003317

- NO VERMICULITE WAS NOTICED WHILE SAMPLING THE CEMETERY PARK BALL FIELDS - ~~NOT~~ 8/19/02

GPS FILE T3A08192

THIS GPS FILE INCLUDES ALL SAMPLE LOCATIONS @ THE CEMETERY PARK BALL FIELDS - ~~NOT~~ 8/19/02

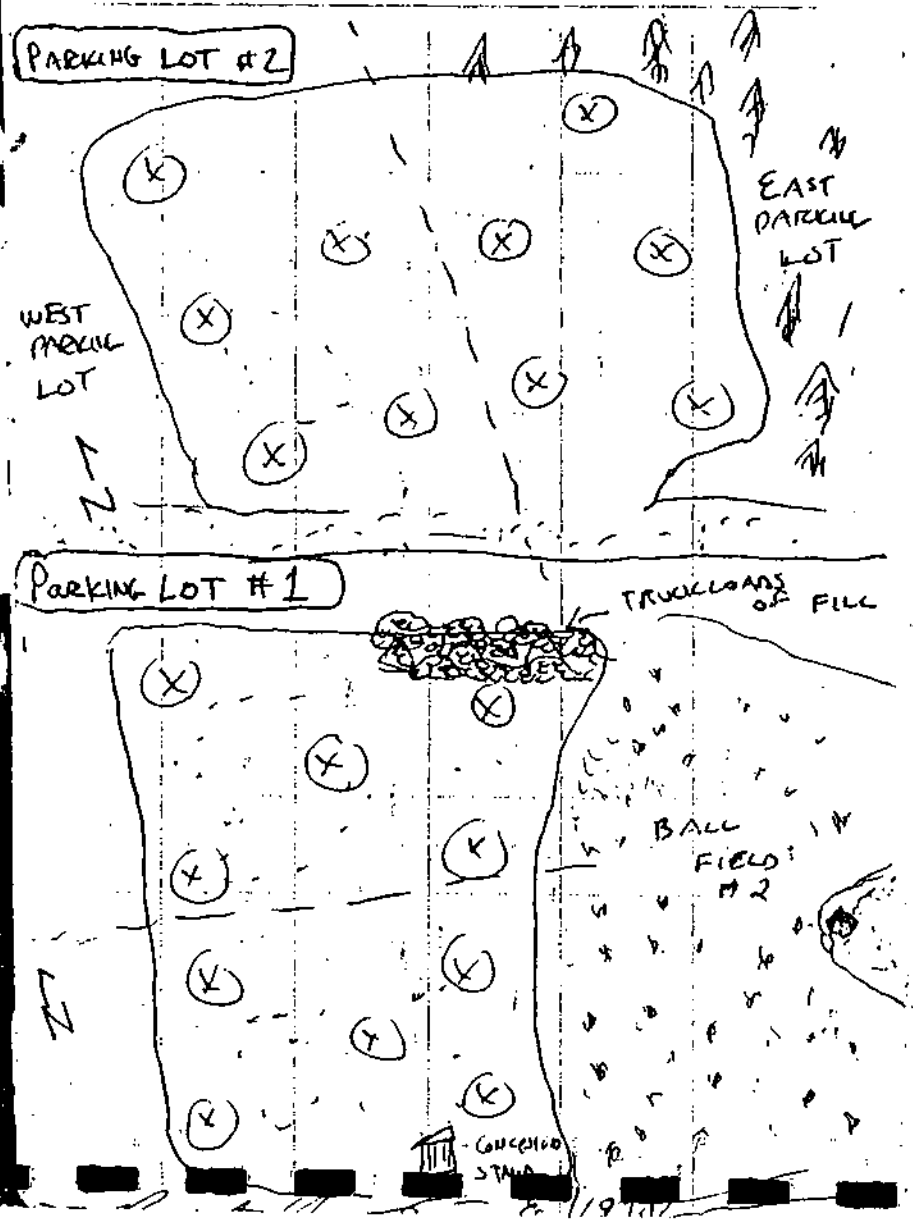
SAMPLE LOCATION SKETCHES



138

Location CEMETERY PARK BALL FIELDS Date 8/19/02

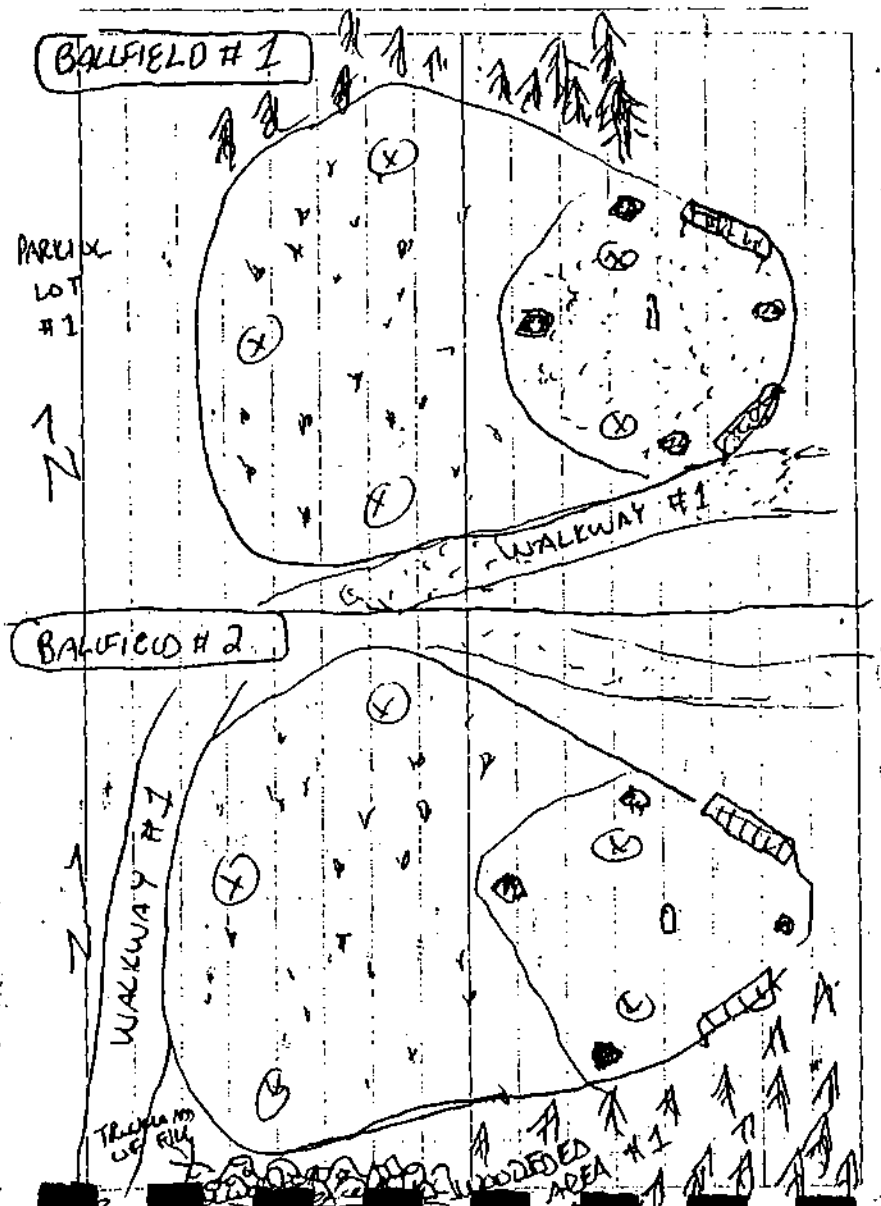
Project / Client LIBBY ASBESTOS- VOLPE EPA Region 8



139

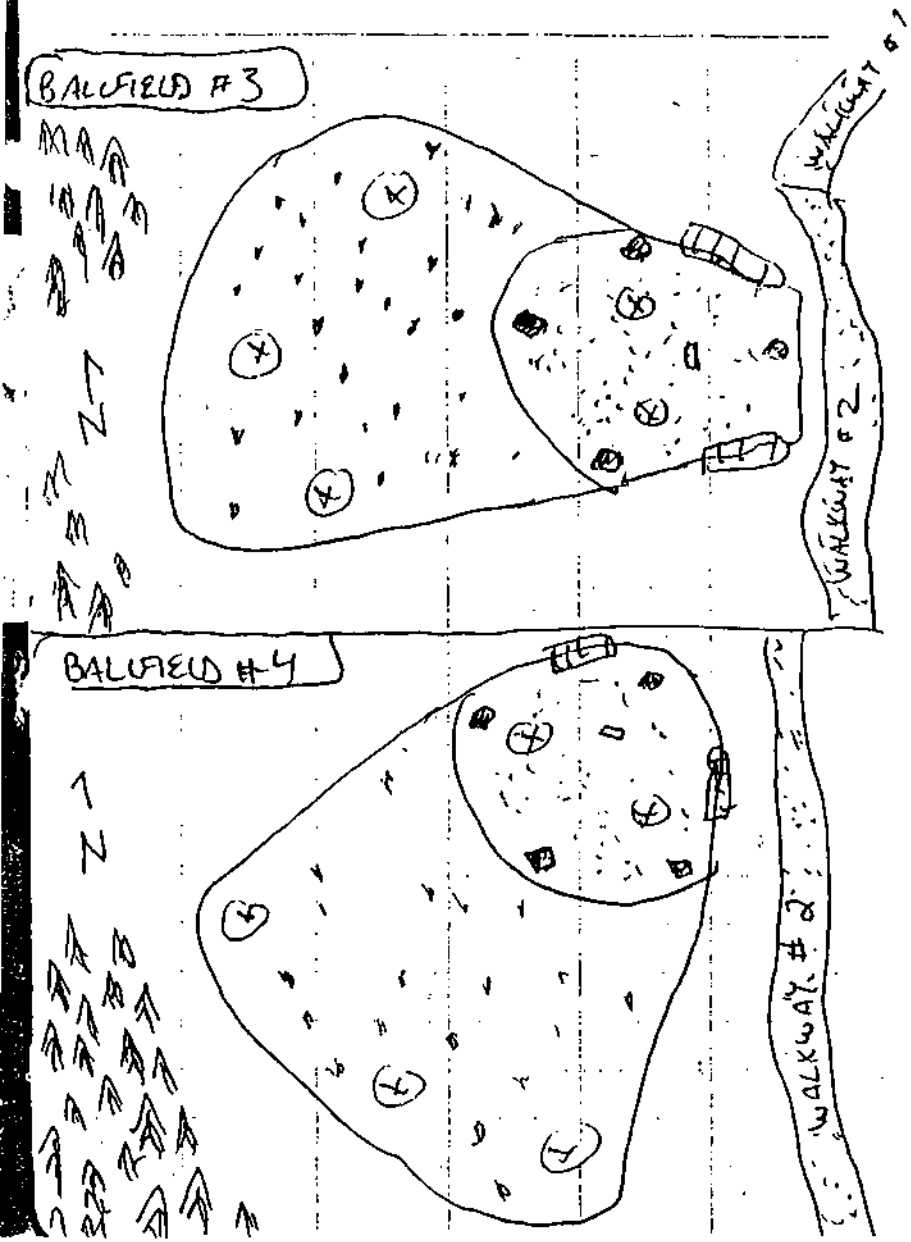
Location CEMETERY PARK BALL FIELDS Date 8/19/02

Project / Client LIBBY ASBESTOS - VOLPE - EPA Region 8



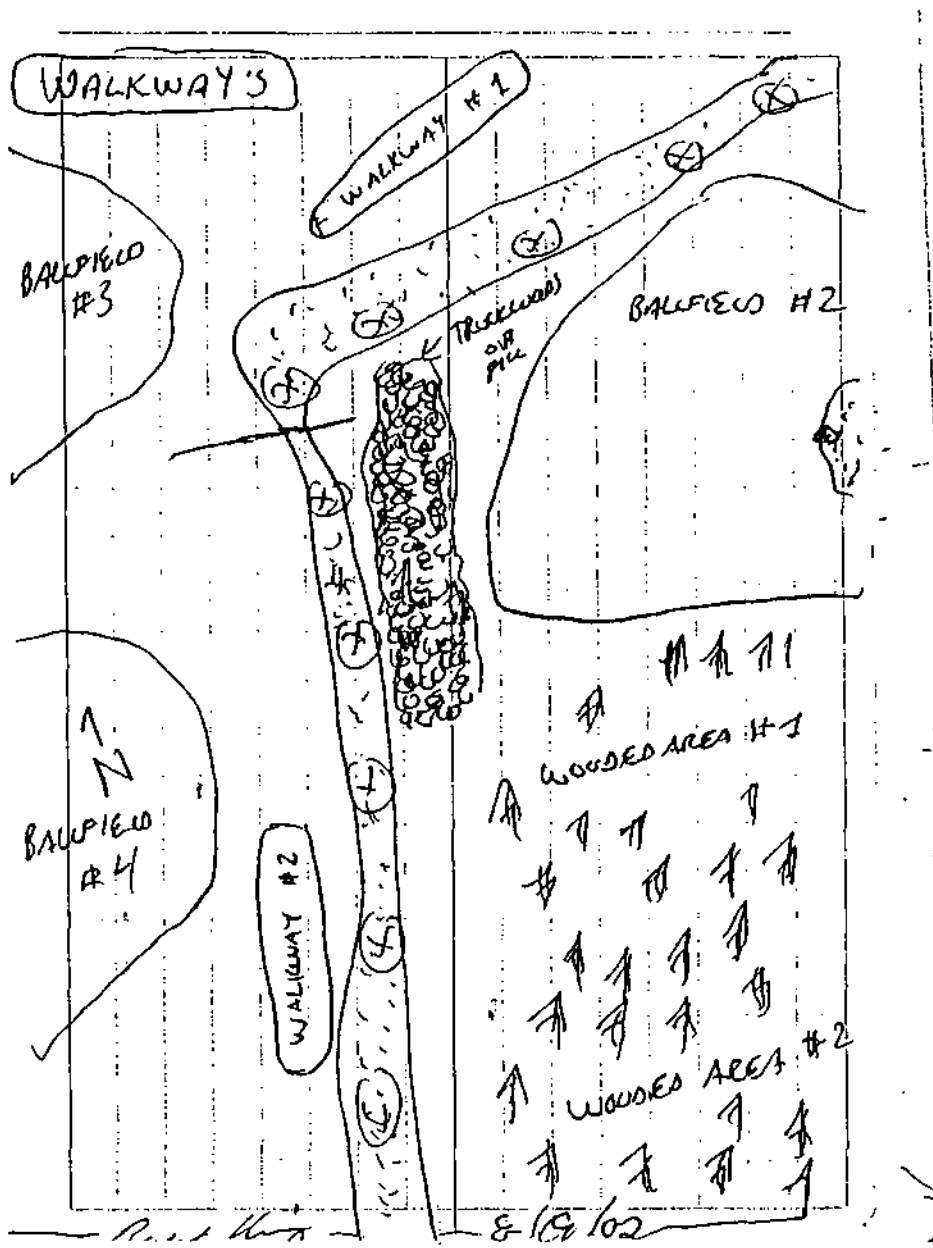
Location CEMETERY PARK BALL FIELDS Date 8/16/02

Project / Client LIBBY ASBESTOS - UCOPE - EPA Region 8



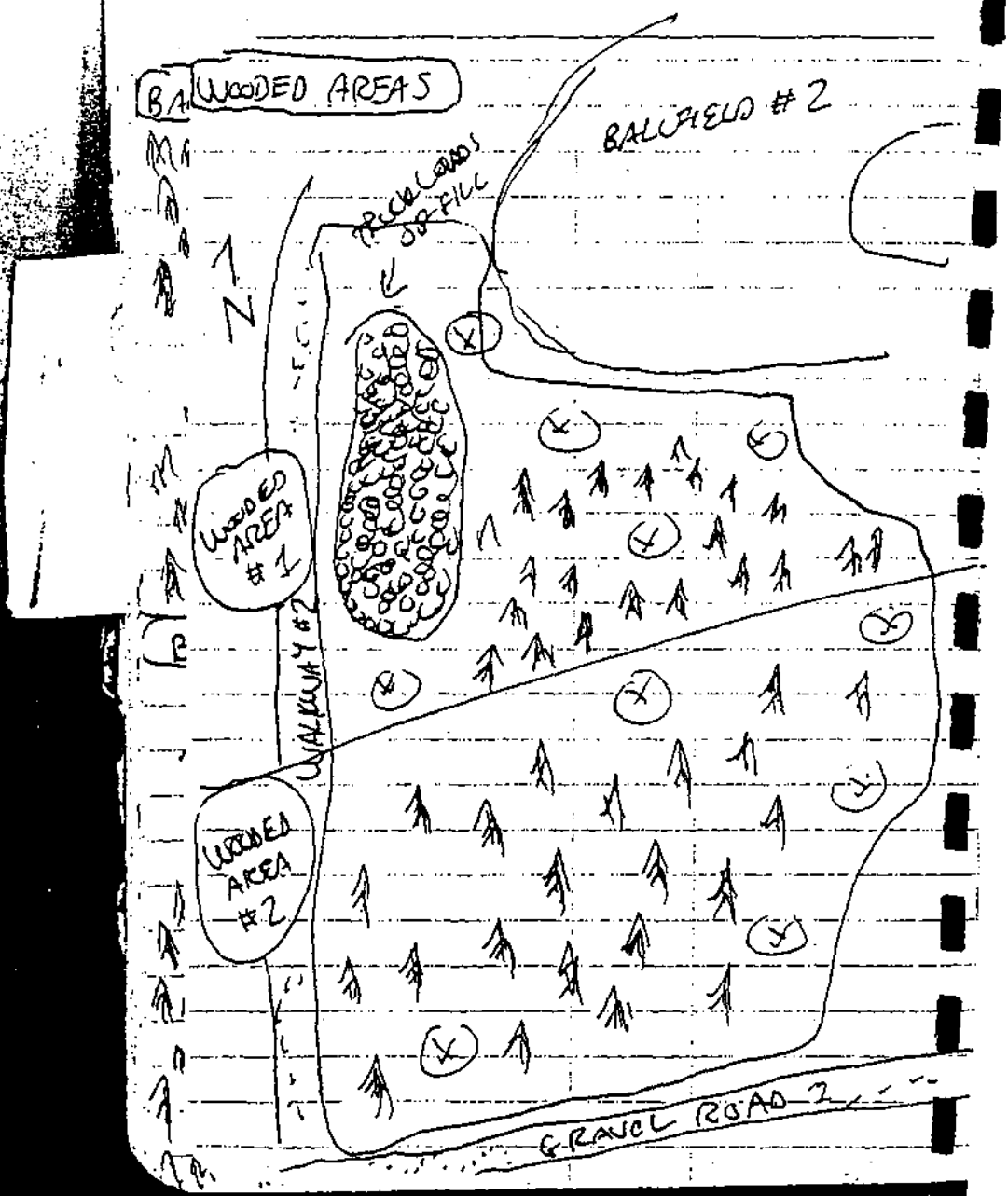
Location CEMETERY PARK BALL FIELDS Date 8/14/02

Project / Client LIBBY ASBESTOS - UCOPE EPA Region 8



140 142 Location CEMETERY PARK BALL FIELDS Date 8/15/02

Project / Client LIBBY ASBESTOS VOLPE EPA Region 8



Appendix B
Field Sample Data Sheets

Sheet No.: CSS (S) - 001998

CONTAMINANT SCREENING STUDY

FIELD SAMPLE DATA SHEET FOR SOIL

955 Crotteau

Scenario No.: N/A Field Logbook No: 10080 Page No: 130 - 131 @ 8/19/02 Sampling Date: 17 AUG 02

Address: CEMETERY PARK BALL FIELDS Owner: CITY OF COBB

Business Name: N/A

Land Use: (circle) Residential School Commercial Mining Roadway (Other (PARK)

Sampling Team: (circle) (CDM) PES Other _____ Names: SCHNEIDER, HUNT, SACKETT, ASKERSON

Data Item	Sample 1	Sample 2	Sample 3
Index ID	CS- 04692	CS- 04693	CS- 04694
Location ID	SP- 115078	SP- 115223	SP- 115224
Sample Group	~~NORTH~~ PARKING LOT #1 @ 8/19/02	PARKING LOT ~~LOT 2~~ #2	PARKING LOT 2 @ 8/19/02
Location Description (circle)	Back yard Front yard Side yard Other NORTH PORTION	Back yard Front yard ~~Side yard~~ Other SOUTH PORTION	Back yard Front yard Side yard Other EAST PORTION
Category (circle)	(FS) FD of _____ Field Blank (lot or equipment)	(FS) FD of _____ Field Blank (lot or equipment)	(FS) FD of _____ Field Blank (lot or equipment)
Matrix Type (Surface soil unless other wise noted)	(Surface Soil) Other _____	(Surface Soil) Other _____	(Surface Soil) Other _____
Type (circle)	Grab (Comp. # subsamples 5)	Grab (Comp. # subsamples 5)	Grab (Comp. # subsamples 5)
Sample Time	1110	1120	1115
Top Depth (in.)	0	0	0
Bottom Depth (in.)	4	4	4
Grid, Quadrant, Section			
Field Comments	BD- _____ PARKING LOT #1	PARKING LOT #1	PARKING LOT #2
	Entered ___ Validated ___	Entered ___ Validated ___	Entered ___ Validated ___

Field Team	Initial
Completed by	MS
QC by	RP

vs 062602

DW 8/19/02

Sheet No.: CSS (S) - 00097

CONTAMINANT SCREENING STUDY

FIELD SAMPLE DATA SHEET FOR SOIL

855 Crotteau

Scenario No.: N/A Field Logbook No: 100080 Page No: 130 - 131 @ 8/19/02 Sampling Date: 17 AUG 02

Address: CEMETERY PARK BALL FIELDS Owner: CITY OF COBB

Business Name: N/A

Land Use: (circle) Residential School Commercial Mining Roadway Other (PARK)

Sampling Team: (circle) (CDM) PES Other _____ Names: SUNDERSON, HUNT, SATHLY, PETERSON

Data Item	Sample 1	Sample 2	Sample 3
Index ID	CS- 04695	CS- 04696	CS- 04697
Location ID	SP- 115225	SP- 115078	SP- 115223
Sample Group	PARKING LOT 2 @ 8/19/02	PARKING LOT 1 @ 8/19/02	PARKING LOT 3 @ 8/19/02
Location Description (circle)	Back yard Front yard Side yard Other WEST PORTION	Back yard Front yard Side yard Other NORTH PORTION	Back yard Front yard Side yard Other SOUTH PORTION
Category (circle)	(FS) FD of _____ Field Blank (lot or equipment)	(FS) FD of _____ Field Blank (lot or equipment)	(FS) FD of _____ Field Blank (lot or equipment)
Matrix Type (Surface soil unless other wise noted)	(Surface Soil) Other _____	Surface Soil (Other SUBSURFACE)	Surface Soil (Other SUBSURFACE)
Type (circle)	Grab (Comp. # subsamples 5)	Grab (Comp. # subsamples 5)	Grab (Comp. # subsamples 5)
Sample Time	1125	1200	1245
Top Depth (in.)	0	4	4
Bottom Depth (in.)	4	15	16
Grid, Quadrant, Section			
Field Comments	BD- N/A PARKING LOT #2	PARKING LOT #1	PARKING LOT #3
	Entered ___ Validated ___	Entered ___ Validated ___	Entered ___ Validated ___

Field Team	Initial
Completed by	[illegible]
QC by	[illegible]

vs 062602

8/19/02

She No.: CSS (S) - 001993

CONTAMINANT SCREENING STUDY

FIELD SAMPLE DATA SHEET FOR SOIL

855 Crotteau

Scenario No.: N/A Field Logbook No: 100080 Page No: 125-132 @ 8/19/02 Sampling Date: 17 AUG 02

Address: CEMETERY PARK BALL FIELDS Owner: CITY OF UKIAH

Business Name: N/A

Land Use: (circle) Residential School Commercial Mining Roadway (Other PARK)

Sampling Team: (circle) (CDM) PES Other _____ Names: SCHLEBUSCH, HUNT, STANLEY, PETERSON

Data Item	Sample 1	Sample 2	Sample 3
Index ID	CS- 04698	CS- 04699	CS- 04700
Location ID	SP- 115224	SP- 115225	SP- 115225
Sample Group	PARKING LOT #2 @ 8/19/02	PARKING LOT #2 @ 8/19/02	PARKING LOT #2 @ 8/19/02
Location Description (circle)	Back yard Front yard Side yard (Other EAST PORTION)	Back yard Front yard Side yard (Other WEST PORTION)	Back yard Front yard Side yard (Other WEST PORTION)
Category (circle)	(FS) FD of _____ Field Blank (lot or equipment)	(FS) FD of _____ Field Blank (lot or equipment)	FS (FD of CS-04699) Field Blank (lot or equipment)
Matrix Type (Surface soil unless other wise noted)	Surface Soil (Other SUBSURFACE)	Surface Soil (Other SUBSURFACE)	Surface Soil (Other SUBSURFACE)
Type (circle)	Grab (Comp. # subsamples 5)	Grab (Comp. # subsamples 5)	Grab (Comp. # subsamples 5)
Sample Time	1515	1525	1535
Top Depth (in.)	4	4	4
Bottom Depth (in.)	16	16	16
Grid, Quadrant, Section			
Field Comments	BD- N/A PARKING LOT #2	PARKING LOT #2	PARKING LOT #2
	Entered ___ Validated ___	Entered ___ Validated ___	Entered ___ Validated ___

Field Team	Initial
Completed by	MK
QC by	RD

vs 062602

DW 8/19/02

Sheet No.: CSS (S) - 001099

CONTAMINANT SCREENING STUDY

FIELD SAMPLE DATA SHEET FOR SOIL 955 Croftcau

Scenario No.: N/A Field Logbook No: 100080 Page No: @BAW 130-132 Sampling Date: 17 MAY 01

Address: CEMETERY PARK BALL FIELDS Owner: CITY OF COBB

Business Name: N/A

Land Use: (circle) Residential School Commercial Mining Roadway Other (PARK)

Sampling Team: (circle) CDM PES Other _____ Names: SCHLEBUSCH, HUNT, SACKMAN, PETERSON

Data Item	Sample 1	Sample 2	Sample 3
Index ID	CS- 04701	CS- 04702	CS- 04703
Location ID	SP- 115226	SP- 115227	SP- 115228
Sample Group	WALKWAY	WALKWAY	YARD
Location Description (circle)	Back yard Front yard Side yard Other WALKWAY #1	Back yard Front yard Side yard Other WALKWAY #2	Back yard Front yard Side yard Other BALL FIELD
Category (circle)	FS FD of _____ Field Blank (lot or equipment)	FS FD of _____ Field Blank (lot or equipment)	FS FD of _____ Field Blank (lot or equipment)
Matrix Type (Surface soil unless other wise noted)	Surface Soil Other _____	Surface Soil Other _____	Surface Soil Other SUBSURFACE
Type (circle)	Grab Comp. # subsamples 5	Grab Comp. # subsamples 5	Grab Comp. # subsamples 5
Sample Time	1610	1620	1705
Top Depth (in.)	0	0	4
Bottom Depth (in.)	4	4	16
Grid, Quadrant, Section			
Field Comments	BD- NA WALKWAY #1	WALKWAY #2	BALL FIELD #1
	Entered ___ Validated ___	Entered ___ Validated ___	Entered ___ Validated ___

Field Team	Initial
Completed by	DS
QC by	BP

vs 062602

DW 8/9/01

Site No.: CSS (S) - 002000

CONTAMINANT SCREENING STUDY

FIELD SAMPLE DATA SHEET FOR SOIL 855 Crotteau

Scenario No.: N/A Field Logbook No: 100080 Page No: 130 - Sampling Date: 17 Jul 02

Address: CEMETERY PARK BALLFIELDS Owner: CITY OF LOBUD

Business Name: N/A

Land Use: (circle) Residential School Commercial Mining Roadway Other (PARK)

Sampling Team: (circle) CDM PES Other _____ Names: SCHLERUSCH, HUNT, PETERSON, SATHALY

Data Item	Sample 1	Sample 2	Sample 3
Index ID	CS- 04704		
Location ID	SP- 115229		
Sample Group	YAED		
Location Description (circle)	Back yard Front yard Side yard Other BALLFIELD	Back yard Front yard Side yard Other _____	Back yard Front yard Side yard Other _____
Category (circle)	FS FD of _____ Field Blank (lot or equipment)	FS FD of _____ Field Blank (lot or equipment)	FS FD of _____ Field Blank (lot or equipment)
Matrix Type (Surface soil unless other wise noted)	Surface Soil Other SUBSURFACE	Surface Soil Other _____	Surface Soil Other _____
Type (circle)	Grab Comp. # subsamples 5	Grab Comp. # subsamples _____	Grab Comp. # subsamples _____
Sample Time	1750		
Top Depth (in.)	MOBILE 4		
Bottom Depth (in.)	16		
Grid, Quadrant, Section			
Field Comments	BD- N/A BALLFIELD #2		
	Entered ___ Validated ___	Entered ___ Validated ___	Entered ___ Validated ___

Field Team	Initial
Completed by	MS
QC by	RP

vs 062602

DW 8/19/02

Sheet No.: CSS (S) - 002001

CONTAMINANT SCREENING STUDY

FIELD SAMPLE DATA SHEET FOR SOIL 855 Crotteau

Scenario No.: NA Field Logbook No: 20080 Page No: 136 Sampling Date: 8/19/02

Address: Cemetery PARK BALL Fields Owner: City of LIBBY

Business Name:

Land Use: (circle) ~~Residential~~ per Cindy School Commercial Mining Roadway Other (PARK)

Sampling Team: (circle) CDM PES Other _____ Names: Robert HUNT Rodney Peterson Rob SALLACY KRISTIN SLOANE

Data Item	Sample 1	Sample 2	Sample 3
Index ID	CS- 04705	CS- 04706	CS- 04707
Location ID	SP- 115230	SP- 115231	SP- 115231
Sample Group	Yard Middle Field	Yard Middle Field	Yard Middle Field
Location Description (circle)	Back yard Front yard Side yard Other BALL FIELD 3	Back yard Front yard Side yard Other BALL FIELD 4	Back yard Front yard Side yard Other BALL Field 4
Category (circle)	FS FD of _____ Field Blank (lot or equipment)	FS FD of _____ Field Blank (lot or equipment)	FS FD of CS-04706 Field Blank (lot or equipment)
Matrix Type (Surface soil unless other wise noted)	~~Surface Soil~~ Other Subsurface	Surface Soil Other Subsurface	Surface Soil Other Subsurface
Type (circle)	Grab Comp. # subsamples 5	Grab Comp. # subsamples 5	Grab Comp. # subsamples 5
Sample Time	1000	1100	1100
Top Depth (in.)	4 Middle	4 Middle	4 Middle
Bottom Depth (in.)	10 18	10 18	10 18
Grid, Quadrant, Section			
Field Comments	BD- _____ Rob Sallacy 8/19/02	8/19/02	
	Entered ___ Validated ___	Entered ___ Validated ___	Entered ___ Validated ___

Field Team	Initial
Completed by	RH
QC by	RS

RW 8/20/02

vs 062602

Sheet No.: CSS (S) - 002002

CONTAMINANT SCREENING STUDY

FIELD SAMPLE DATA SHEET FOR SOIL

355 Croteau

Scenario No.: NA Field Logbook No: 1000E0 Page No: ~~17~~ RM 8/19/02 Sampling Date: 8/19/02

Address: Cemetery Park ~~Field~~ Baseball Field Owner: City of Libby

Business Name: ______

Land Use: (circle) ~~Residential~~ (RM 8/19/02) School Commercial Mining Roadway Other (PARK)

Sampling Team: (circle) (CDM) PES Other ____ Names: Robert Hunt Rodney Peterson Rob Shirley Kristi Sloane

Data Item	Sample 1	Sample 2	Sample 3
Index ID	CS- 04708	CS- 04709	CS- 04710
Location ID	SP- 115232	SP- 115233	SP- 115232
Sample Group	Field	Field	Field
Location Description (circle)	Back yard Front yard Side yard (Other Wooded Area ~~1~~ #1 RM)	Back yard Front yard Side yard (Other Wood Area 2)	Back yard Front yard Side yard (Other Wood Area 1)
Category (circle)	(FS) FD of ____ Field Blank (lot or equipment)	(FS) FD of ____ Field Blank (lot or equipment)	(FS) FD of ____ Field Blank (lot or equipment)
Matrix Type (Surface soil unless other wise noted)	(Surface Soil) Other ____	(Surface Soil) Other ____	Surface Soil (Other SUBSURFACE)
Type (circle)	~~Grab~~ (Comp. # subsamples 5)	~~Grab~~ (Comp. # subsamples 5)	~~Grab~~ (Comp. # subsamples 5)
Sample Time	1345	1500	1415
Top Depth (in.)	0	0	4
Bottom Depth (in.)	4	4	~~16~~ 18
Grid, Quadrant, Section			
Field Comments	BD 8/19/02	8/19/02	
	Entered ___ Validated ___	Entered ___ Validated ___	Entered ___ Validated ___

Field Team	Initial
Completed by	RM
QC by	RS

DW 8/20/02

vs 062602

Sheet No.: CSS (S) - 002003

CONTAMINANT SCREENING STUDY

FIELD SAMPLE DATA SHEET FOR SOIL 855 Crofteau

Scenario No.: NA Field Logbook No: 14680 Page No: 137 Sampling Date: 8/19/02

Address: Century Park BALL Fields Owner: City of LIBBY

Business Name: _____

Land Use: (circle) Residential School Commercial Mining Roadway Other (PARK)

Sampling Team: (circle) CDM PES Other _____ Names: Robert Hunt Kristi Slave Rudy Peterson Rob Sarkey

Data Item	Sample 1	Sample 2	Sample 3
Index ID	CS- 04711		
Location ID	SP- 115233		
Sample Group	Field		
Location Description (circle)	Back yard Front yard Side yard Other Wood line 2	Back yard Front yard Side yard Other _____	Back yard Front yard Side yard Other _____
Category (circle)	FS FD of _____ Field Blank (lot or equipment)	FS FD of _____ Field Blank (lot or equipment)	FS FD of _____ Field Blank (lot or equipment)
Matrix Type (Surface soil unless other wise noted)	Surface Soil Other Subsurface	Surface Soil Other _____	Surface Soil Other _____
Type (circle)	Grab Comp. # subsamples 5	Grab Comp. # subsamples ____	Grab Comp. # subsamples ____
Sample Time	1545		
Top Depth (in.)	4		
Bottom Depth (in.)	18"		
Grid, Quadrant, Section			
Field Comments	BD- _____ 8/19/02		
	Entered ___ Validated ___	Entered ___ Validated ___	Entered ___ Validated ___

Field Team	Initial
Completed by	RH
QC by	RS

vs 062602

DW 8/20/02

Appendix C
Analytical Results for Soil Samples Collected, August 2002

FILE NAME: EMSL04_040401855_PLM_VE.xls

PLM VISUAL ESTIMATION DATA RECORDING SHEET

Laboratory Name: EMSL04
Job Number: 040401855
Date Received: 2/6/2004
SOP Name/Revision: SRC-Libby-03 SOP rev0 v8
Spreadsheet version: 1f

Data Entry by: K. Carr
Checked by: L. Moore

EPA Index ID	Index Suffix ID	QA Type (see list)	Lab Sample ID	Date Analyzed	Analyst Name	Sample Appearance	Rel Material (B or T)	Libby Amphibole (LA)			Other Amphibole (OA)			Chrysotile (Ch)			Comments
								Qual	LA-MF (%)	Bin	Qual	OA-AF (%)	OA Type (see list)	Qual	Ch-AF (%)	Deviation?	
CS-04692	FG	Not QA	0001	2/7/2004	L. Price	Brown,Non-Fibrous,Homogeneous	ISTM	ND		A	ND			ND			
CS-04692	FG	LD	0001	2/7/2004	K. Reeves		ISTM	ND		A	ND			ND			
CS-04693	FG	Not QA	0002	2/7/2004	L. Price	Brown,Non-Fibrous,Homogeneous	ISTM	ND		A	ND			ND			
CS-04694	FG	Not QA	0003	2/7/2004	L. Price	Brown,Non-Fibrous,Homogeneous	ISTM	ND		A	ND			ND			
CS-04695	FG	Not QA	0004	2/7/2004	L. Price	Brown,Non-Fibrous,Homogeneous	ISTM	ND		A	ND			ND			
CS-04696	FG	Not QA	0005	2/7/2004	L. Price	Brown,Non-Fibrous,Homogeneous	ISTM	ND		A	ND			ND			
CS-04697	FG	Not QA	0006	2/7/2004	L. Price	Brown,Non-Fibrous,Homogeneous	ISTM	ND		A	ND			ND			
CS-04698	FG	Not QA	0007	2/7/2004	L. Price	Brown,Non-Fibrous,Homogeneous	ISTM	ND		A	ND			ND			
CS-04699	FG	Not QA	0008	2/7/2004	L. Price	Brown,Non-Fibrous,Homogeneous	ISTM	ND		A	ND			ND			
CS-04700	FG	Not QA	0009	2/7/2004	L. Price	Brown,Non-Fibrous,Homogeneous	ISTM	ND		A	ND			ND			
CS-04701	FG	Not QA	0010	2/7/2004	L. Price	Brown,Non-Fibrous,Homogeneous	ISTM	ND		A	ND			ND			
CS-04702	FG	Not QA	0011	2/7/2004	L. Price	Brown,Non-Fibrous,Homogeneous	ISTM	ND		A	ND			ND			
CS-04702	FG	LD	0011	2/7/2004	K. Reeves		ISTM	ND		A	ND			ND			
CS-04703	FG	Not QA	0012	2/7/2004	L. Price	Brown,Non-Fibrous,Homogeneous	ISTM	ND		A	ND			ND			
CS-04704	FG	Not QA	0013	2/7/2004	L. Price	Brown,Non-Fibrous,Homogeneous	ISTM	ND		A	ND			ND			
CS-04705	FG	Not QA	0014	2/7/2004	L. Price	Brown,Non-Fibrous,Homogeneous	ISTM	ND		A	ND			ND			
CS-04706	FG	Not QA	0015	2/7/2004	L. Price	Brown,Non-Fibrous,Homogeneous	ISTM	ND		A	ND			ND			
CS-04707	FG	Not QA	0016	2/7/2004	L. Price	Brown,Non-Fibrous,Homogeneous	ISTM	ND		A	ND			ND			
CS-04708	FG	Not QA	0017	2/7/2004	L. Price	Brown,Non-Fibrous,Homogeneous	ISTM	ND		A	ND			ND			
CS-04709	FG	Not QA	0018	2/7/2004	L. Price	Brown,Non-Fibrous,Homogeneous	ISTM	ND		A	ND			ND			
CS-04710	FG	Not QA	0019	2/7/2004	L. Price	Brown,Non-Fibrous,Homogeneous	ISTM	ND		A	ND			ND			
CS-04711	FG	Not QA	0020	2/7/2004	L. Price	Brown,Non-Fibrous,Homogeneous	ISTM	ND		A	ND			ND			